

**Patent claims**

1. A method for controlling the production of injection-molded parts in an injection mold (5) with a cavity (10) and possibly a mold core (9) of an injection molding machine, the temperature of the mold (5) being controlled, characterized in that the cavity (10) and/or the mold core (9) is/are directly heated or cooled.
2. The method as claimed in claim 1, characterized in that excess heat is removed by one or more cooling circuits (14) in the mold (5).
3. A method for controlling the production of injection-molded parts in an injection mold (5), characterized in that the injection-molded part is at least partly optically viewed with corresponding instruments (15) in a control loop and the result of the viewing is compared with references and signals for a machine control (17) are derived from this.
4. The method as claimed in claim 3, characterized in that the dimension and/or the surface finish and/or the color of the injection-molded part is/are determined.
5. The method as claimed in claim 3 or 4, characterized in that the determination takes place with a scanner, a CCD camera or the like.

- 11 -

6. The method as claimed in one of claims 3 to 5, characterized in that pressure and temperature values (p, T) in the cavity (10) are included in the control process.

7. An injection molding machine for producing injection-molded parts in an injection mold (5) with a cavity (10) and possibly a mold core (9), characterized in that the cavity (10) and/or the mold core (9) are assigned heating or cooling elements (11, 12.1 - 12.3) or the cavity (10) and/or the mold core (9) has a thermoceramic coating (13).

8. The injection molding machine as claimed in claim 7, characterized in that one or more temperature control circuits (14) are provided in the injection mold (5).

9. An injection molding machine for producing injection-molded parts in an injection mold (5) with a cavity (10) and possibly a mold core (9), characterized in that the injection mold (5) is assigned an instrument (15) for optically viewing the injection-molded part and said instrument is connected to a control (16) comprising reference values, which operates a machine control (17).